



Explore PLANTS



Facilitator's Guide Documentation and Reflection

What Is Documentation and Reflection?

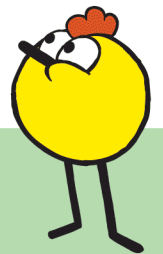
- Documentation is the process of recording experiences.
- Using documentation, children and educators can look back on their experiences during an activity and think more deeply about them.

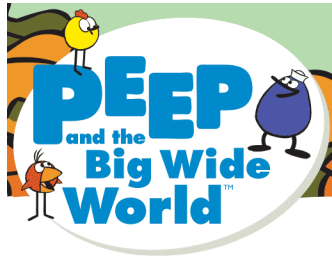
What are some types of documentation?

- **Child-generated documentation** happens when children record their own learning. It can include:
 - drawing a picture of what they did
 - taking photos of their work
 - explaining what they're doing and what happened while you transcribe their words
- **Educator-generated documentation** can include:
 - creating charts
 - making notes
 - taking photos
 - recording audio
 - shooting video

Why is documentation and reflection important?

- **Children don't learn from their experiences alone.**
 - They need to think about what they have done and talk with others.
 - They will often notice new things about their work the second or third time they review it.
- **It gives children a sense of ownership.**
 - To see their work documented gives children a sense of ownership—making it much more likely that they will remember, apply, and build upon this learning.





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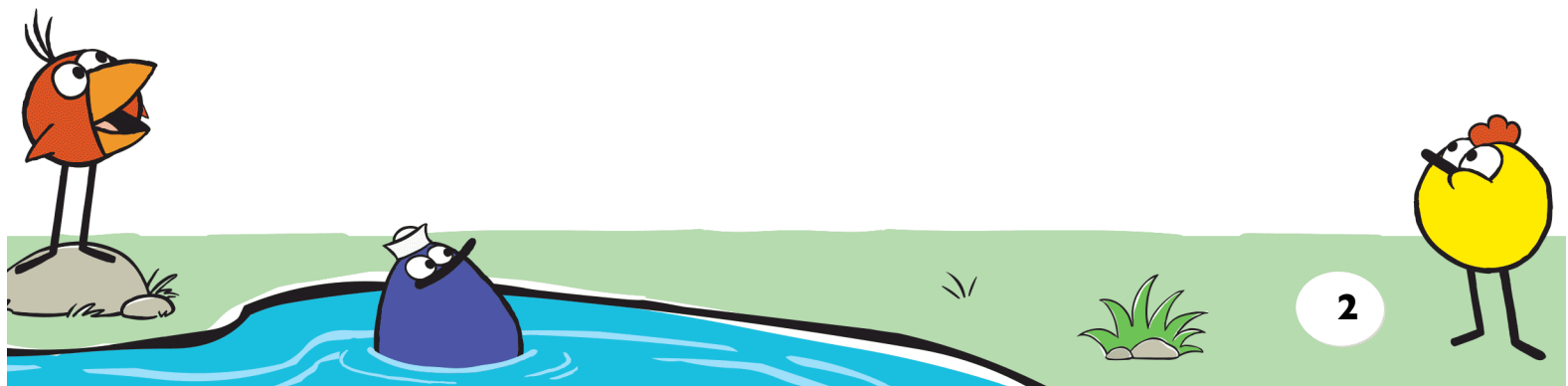


- **It captures the process of scientific inquiry.**
 - Science is a process that includes predictions, testing, questioning, problem solving, experimentation, and sharing ideas. Documentation helps capture the process of scientific inquiry, not just the outcomes.
 - It allows children to see the steps they took.
 - Children begin to learn that an important part of science is collecting, describing, and recording of data.
- **Language skills are strengthened.** Commenting on documentation asks children to:
 - clarify their ideas
 - explain their reasoning
 - communicate their perspectives, both to themselves and to others
 - use and repeat new scientific words and incorporate them into their vocabulary
- **It is an invaluable teaching tool,** allowing you to:
 - develop activities that respond to the needs of each child
 - communicate with parents and share concrete examples of children's work
 - show children the connections between the different activities and ideas they've been exploring
 - understand an individual child's skills, growth, struggles, or misconceptions
 - assess children's thinking and your own teaching

Teaching Strategy: Encouraging Children to Create Documentation

Why is encouraging children to create documentation an effective teaching strategy?

By helping children document what they are doing, you make it possible for them to reflect on their work and to understand and make sense of their experiences.





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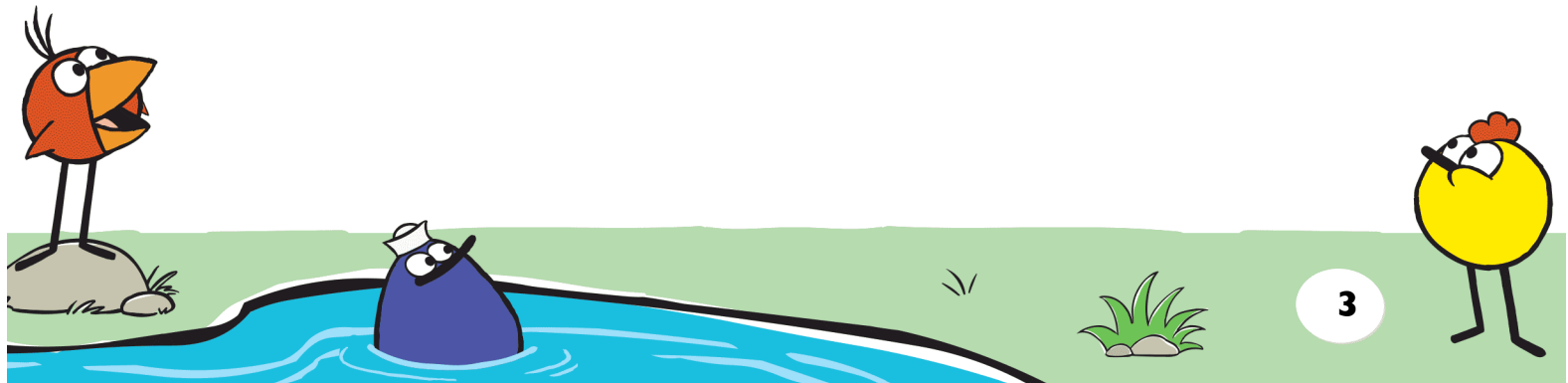


Children can be encouraged to document their work in many different ways:

- **Drawing pictures** is an ideal way for children to make their learning visible.
Example: On a trip outside, you might have children do rubbings of the bark on several different trees. Back inside, they can compare their rubbings and discuss similarities and differences.
- **Charts, graphs, and models** allow children to “see” or visualize their thinking and to compare their results with peers.
Example: Children might keep track of how tall each plant is using a piece of yarn or long paper strip for measuring. Have a piece of yarn or paper designated for each plant. Children can hold the yarn or paper vertically next to the plant and mark off the plant’s height each day with a marker.
- **Dictating thoughts** for you to transcribe (usually in an abbreviated form) helps children learn about their thought process. Children learn about their thinking through the act of communicating.
Example: An educator might accompany children as they make observations on a nature walk. Later she can read their words back to them as they reflect upon the walk. Reading the child’s dictation back to her to check for accuracy further cements this process.
- **Recording, videotaping, or photographing** a child’s demonstration or explanation gives children perspective on what they have accomplished.
Example: Children might document the development of bean plants they are growing by taking photos of them each day and posting them on a large chart.

Your Experiences

- What kinds of documentation do you typically do with children?
- What types of documentation do children seem most interested in creating—do some forms come more naturally to them than others?
- Have you run into any challenges while having children document their explorations? What kind?





Teaching Strategy:

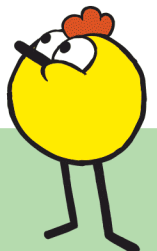
Using Documentation and Reflection as Teaching Tools

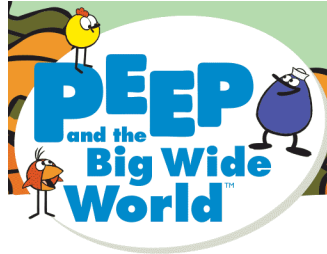
How does using documentation and reflection benefit your teaching?

Documentation will engage children, deepen their learning, and make connections between the different science activities you've shared together. It will spark conversation and get children to share what they did and learned. It will also help you decide how to support the child's learning.

There are many benefits to documenting children's work:

- **It helps children remember, share, and reflect** on their ideas and experiences. Looking at a photo or chart helps children recall their thoughts and ideas about what they were pursuing.
Example: To document how to plant grass seeds in soil and in plastic sandwich bags, you might take photographs documenting a child demonstrating each step of the planting process. The photos can help children recall their experiences and spark conversation about the differences and similarities between growing seeds in soil and in plastic sandwich bags. The photos can also be used as a "how to" instructional that can be brought home and shared with parents so that children can continue experimenting with growing seeds at home.
- **It connects ideas and builds on learning.** Documentation helps children see connections between the different activities they've done and encourages them to think more deeply about them. Charts are especially good for this.
Example: You might begin a week of exploration with a chart called, "Things That Grow Around Me." Each day children can add growing things that they noticed on the way to and from school. At the end of each day, review what is already on the chart and add any new plants, trees, or flowers that children suggest. Returning to the chart each day helps them think back on the activities they have done and to see the thread of ideas that connects them.
- **It shows that you take children's explorations seriously.** Recording something gives it importance.
Example: You might videotape children as they display twigs, seeds, and bark they discovered on a scavenger hunt. Invite children to describe what they found. The very fact that you've taped their explorations shows children that you consider their explorations valuable.





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- **It helps with lesson plans and in understanding the needs of each child.** Documentation is key in helping you plan instruction and future activities. With your notes, transcriptions, and photos, you can see what really catches the children's attention. What do they want to know more about? What was hard for them to grasp? Did they seem to engage more in indoor or outdoor activities about plants?
- **It enables specific communication with parents or caregivers.** Here are a few activities you can use:
 - Send home children's drawings and transcriptions.
 - Set up a bulletin board with photos, charts, and drawings that children can show their caregivers and talk about when it's pick-up time.
 - Create a portfolio for children that shows evidence of their growth and learning over time.
 - Strengthen the home/school connection by encouraging parents to explore plants with their children at home.

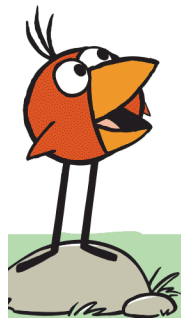
Your Experiences

- Do you use cameras, video, or audio recording devices when you document? How has technology helped you? Have you encountered any problems with it?
- In what ways do you use “low-tech” resources, such as written notes, to document learning?
- Have you faced any challenges when documenting children’s learning? If so, what were they?
- What benefits of documentation have you noticed?

Teaching Strategy: Reflecting Together

Why is reflecting together an effective teaching strategy?

After children document their work, it’s essential they reflect on it: that’s where much of their understanding about what they experienced takes place. As you reflect together, you strengthen children's reasoning abilities, help them consider others’ perspectives, build their communication skills, and learn to better understand their thinking and learning.





There are many ways to promote reflection:

- **Children sharing ideas**
 - Have a child present her documentation in a group and encourage the others to ask questions or comment on something they find interesting.
 - An engaged and receptive audience will make the child who is presenting feel excited and proud to be showing his work, and more confident in expressing ideas and conclusions.
 - The audience also benefits by working on their ability to listen and sustain attention, and by developing social skills in taking turns.
 - Group reflection encourages children to consider new perspectives.
 - Children may become inspired to try something new next time.

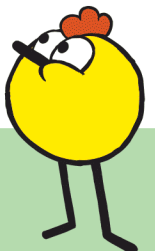
- **One-on-one conversations**
 - Not all children will want to share their reflections in a group.
 - Conversations with you during or after a child has created documentation gives you the chance to explore with a child on his or her own terms.

- **Displaying documentation**
 - Post on bulletin boards, poster board, or a tri-fold board.
 - Create a “save it” shelf, where children keep their creations, or a class album full of photos, children's drawings, and children's words.
Example: Use a post-it note or index card to write what they have to say about a plant they have grown and are now displaying.

- **Including parents in reflection**
 - Consider inviting parents to come and observe as children talk about their creations.
Example: You might even invite parents to come and observe as children talk about the plants they are growing. You could create a class garden and have children give their parents and caregivers a tour. Encourage children to ask the adults, *Do you have any questions about this plant?* As children respond to their families' questions, they'll be reflecting upon their learning.

Your Experiences

- What types of documentation have you found most effective for helping children to reflect?
- How would you compare guiding group reflection and reflecting with children individually? Any success stories to share?





More Resources

For more information on documentation and reflection

There are additional Teaching Strategy PDFs on the PEEP Web site along with instructional videos. These illustrate documentation and reflection related to the other PEEP science units: Color, Water, Shadows, Ramps, and Sound.

For more videos and information on other topics

In addition, the Web site offers Teaching Strategies and videos on other professional development topics: Learning Environments, Individualized Instruction, and Science Talk.

